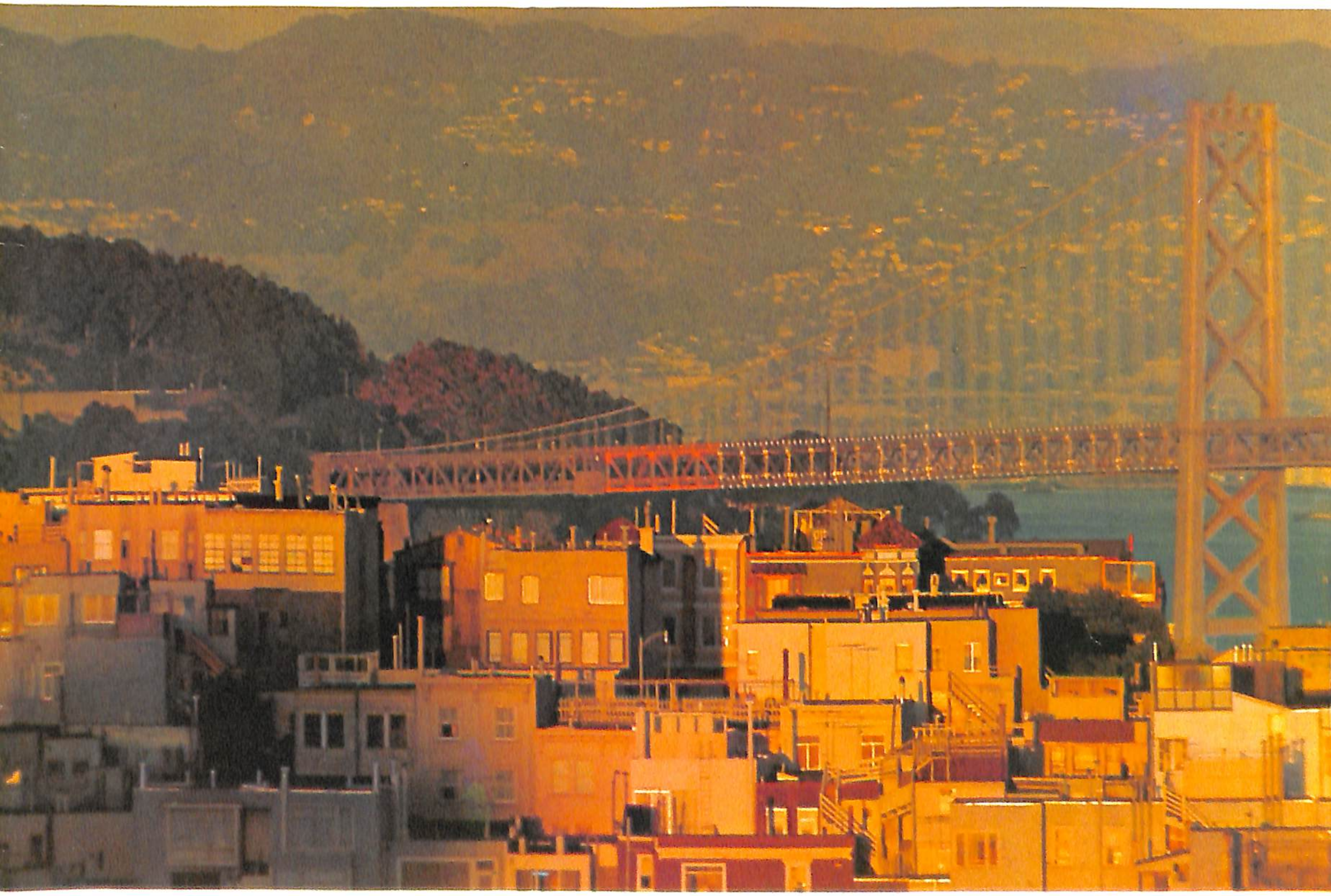
LEICA
PHOTOGRAPHY



COVER
Bruce Davidson
Oakland Bay Bridge
in the late afternoon
taken with the Leicaflex SL
and 400mm f/6.8 Telyt lens.

Anthony Wolff, White Mule, *Tennessee, 1968*

LEICA PHOTOGRAPHY

Volume 23 Number 1 1970

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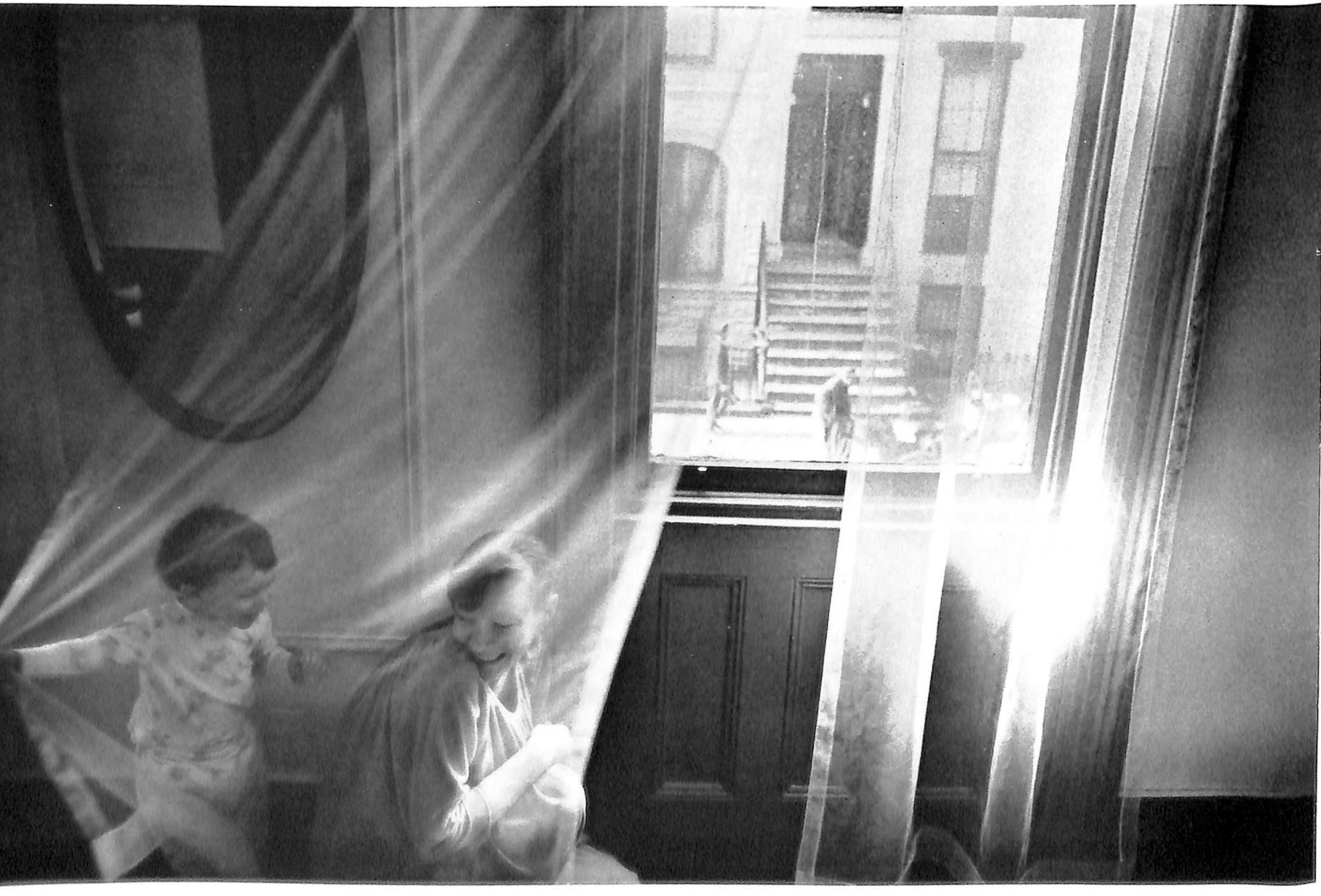
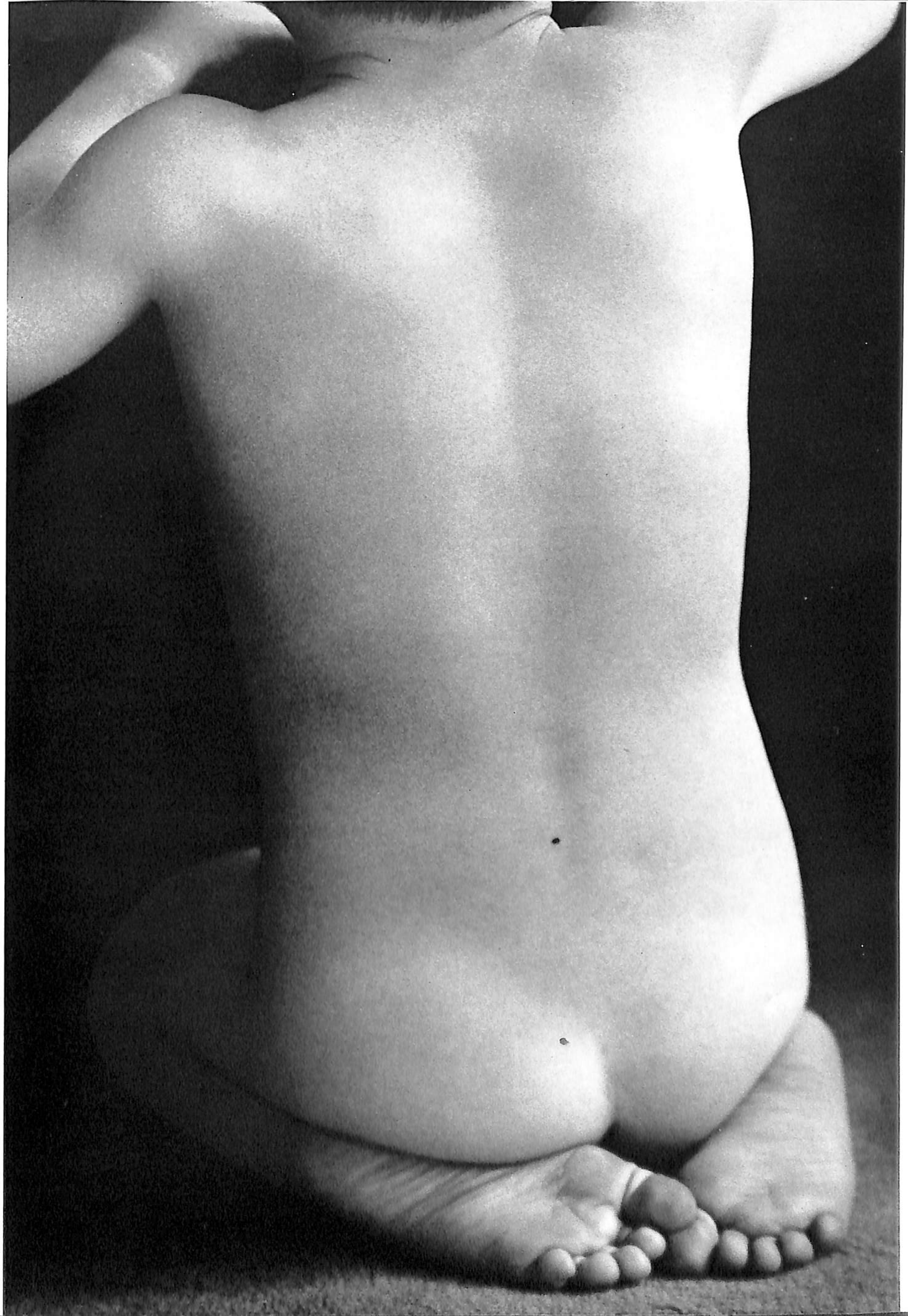
SHOWPLACE

Anthony Wolff

Most parents photograph their children. Anthony Wolff has been doing so since his family began almost five years ago. But very few pictures in family albums have the grace and distinction of the ones on these pages.

A former picture editor at TimeLife Books and most recently a Senior Editor at LOOK Magazine, 31-year-old Wolff has been involved with photographs for a number of years. He was first exposed to





them professionally while working as assistant to the then television director John Frankenheimer before the latter branched off into films. Wolff was struck by "the importance of images, by their power, and by the fact that one *makes* an image, it doesn't just happen". His first photographs grew directly out of his television work and were made in television studios, with subject matter and lighting handed to him ready made. It was a good way to start, he feels. He has been photographing ever since, although as yet he has not tried to make a living at it. His career moved in the direction of editing and writing, most often only indirectly implicated with pictures since it was usually "another" photographer who was actually taking them.

Photographically, his family is for him a subject of "infinite variety and readiness-to-hand". More importantly, he says, photographing it has been a way

of affirming his membership in it, particularly during the very early years, when it is influenced more by the mother and a father often feels excluded.

The photographs speak for themselves. In the earliest one, Nicolas at one month old, rests his head on his mother's shoulder. The latest one was taken last fall, with 4½ year old Nicolas and 2½ year old Rebecca looking into the mirror.

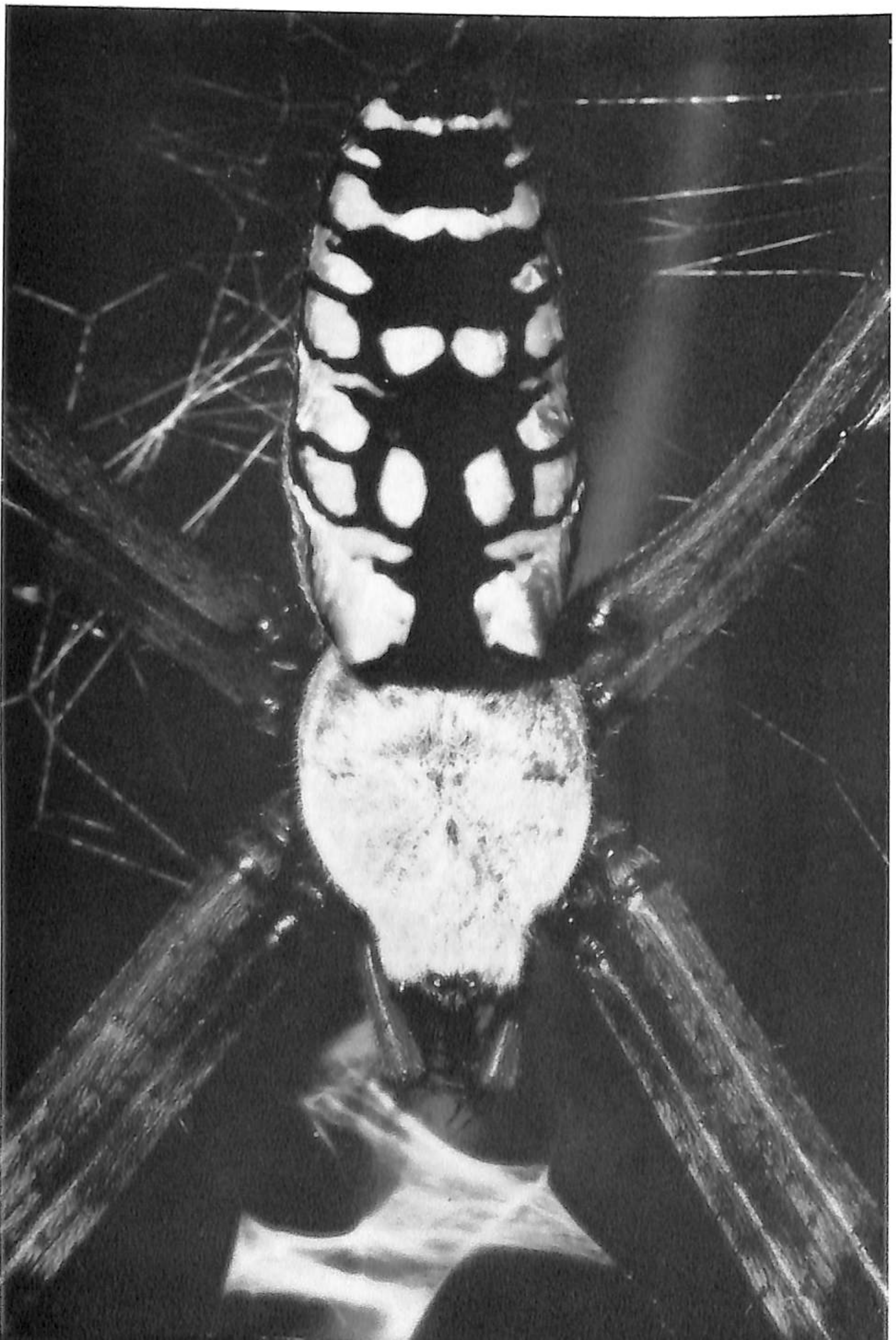
Wolff's cameras are a Leica M3 and an M2. He works most often with the M2 and 35mm combination, also with the 90mm focal length. He is not interested in tricky technique as a synonym for style, does not crop his pictures, and wants well exposed negatives that respond to normal printing on normal paper. He makes his own prints with a Focomat IC enlarger.

Wolff manages to take on a free-lance photographic assignment from time to time. As proof that he does not only take pictures of his family see the inside front cover of this issue.

How I Photograph Insects and Spiders

James H. Carmichael, Jr.

Live subjects, slightly chilled, are the best ones



Whereas most zoologists sooner or later acquire an interest in photography as an adjunct to their profession, my own fascination with insects and spiders grew out of a quest for unusual photographic subject matter. And, though only an amateur naturalist, I never cease marvelling at the incredible structure, coloration and habits of the varied and innumerable varieties of arthropods.

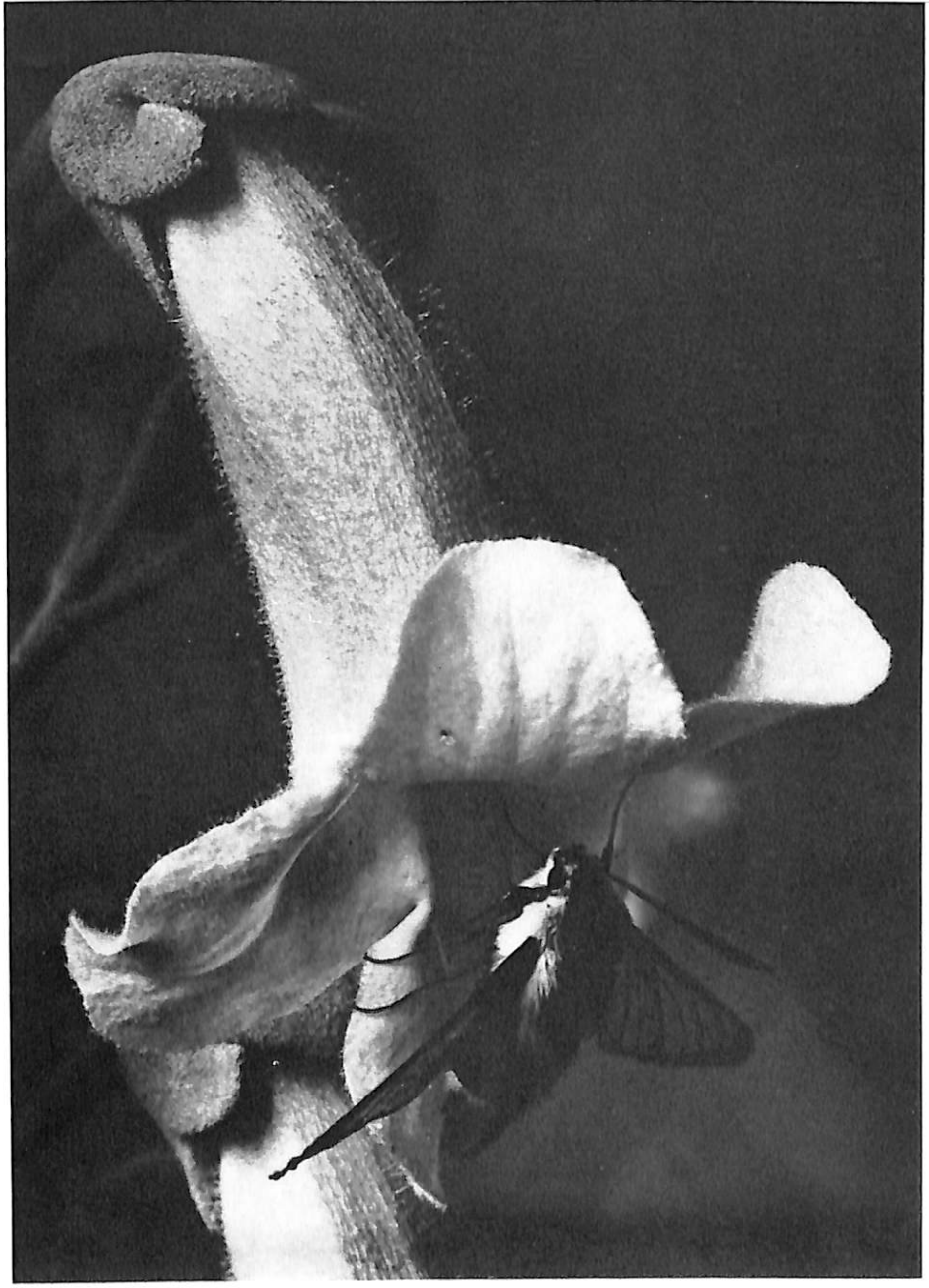
Peering through my Visoflex, in awe of some small creature, I must often remind myself that the purpose at hand is photography and that I am not taking an excursion into the realm of fantasy.

To capture on film the beauty of the macrozoological world, I have always depended on the rangefinder Leicas plus the Visoflex and Leica bellows. Three Leitz lenses (135mm, 90mm, and 50mm) an electronic flash unit, a light meter, and a sturdy tripod complete my list of close-up equipment.

Since color is perhaps the most striking aspect of insects, ninety-five percent of my close-ups are made on Kodachrome II film, selected because its brilliance and fine grain are most suitable for enlarged illustrations in nature magazines.

Consistent use of a tripod may seem old-fashioned in this day of fast films, electronic flash rings and automatic lenses, but I feel certain that this habit prompts me to be more deliberate in composition, focusing, and even exposure calculations. A good tripod also permits the option of slow, natural-light exposures, and it certainly helps to preserve the sharpness for which Leitz lenses are famous.

As every experimenter knows, limited depth of field and critical focus-



ing are major problems in extreme close-up work. A tripod and the brilliant ground glass screen of the Visoflex both help considerably to ease the focusing problem. In coping with limited depth of field, I have a simple rule; after focusing carefully at maximum aperture, I stop down to f/16 for every close-up shot. Try to avoid f/22 or smaller apertures, particularly when the bellows is racked out near its full extent, because of some inevitable image degradation. (This is inevitable in optics because of diffractions effects at small apertures... Ed.)

The selection of a slow film and small apertures, coupled with increased exposure factors, means either very slow shutter speeds or intensive subject illumination. For the latter alternative, a reliable electronic flash is essential, since insects usually react quite vigorously to the blinding effect of conventional flash bulbs or to the heat of flood lamps. About three-fourths of my insect pictures are made with a single flash. As with "normal" photography, it is often desirable to use multiple lights with close-ups; but it is much more awkward because of cramped working space between lens and subject.

Electronic flash rings that are fitted around the lens are convenient in macrophotography but usually produce a shadowless picture. I usually hold my flash unit just a few inches to one side of (or above) the lens, taking advantage of any neutral reflective material near the subject that might bounce some light into the shadow areas. If I am working on a table top, I often place small pieces of white cardboard at proper angles near the subject to bounce in additional light.

It seems a wise policy in macrophotography to settle on one type film and an f/11 or f/16 aperture for all flash exposures. This means the memorization of only one set of flash-to-subject distances for various degrees of subject magnification. Bear in mind that exposure factors increase along with subject magnifications. So, the flash unit must be held ever closer to the subject as magnification increases. The correct distances should be determined by computation *and* experiment with each flash model and film type. Keep notes and you will soon work out the proper distances for your particular equipment.

Insect photography with natural light is somewhat trickier than with flash due to the high probability of subject movement. If the subject appears to be at rest, however, I have no reluctance to make an exposure as long as ten seconds. (The tripod and a gentle squeeze of the cable release usually prevent camera movement.) I obtain my basic exposure data from a reflected-light meter, then make the necessary allowances for exposure factor and usually disregard the possibility of reciprocity failure in film. Some of my best insect photos have been made with long exposures. And, although warnings about reciprocity failure flash through my mind occasionally, I have never been disturbed by the slight alteration of colors that may occur in Kodachrome II with exposures under ten seconds.

Perhaps the cardinal rule of insect photography is: never photograph a *dead* creature. Its lifeless appearance is nearly impossible to disguise. Another useful pointer is: for outdoor work, select comfortable, windless days. Trying to photograph insects outside in the summer sun or with a strong breeze blowing, can be an exceedingly exasperating business. You can save yourself agony sometimes by catching your subjects in a delicate net or jar and bringing them inside.

A useful technique is to put the insect (inside its container) on the refrigerator for a minute or so to chill it not long enough to kill it, however. Remove the torpid creature, coax it onto a leaf or twig, and you have until he warms up again to get a picture.

Diurnal insects like butterflies and dragonflies are usually more docile at night and will often perch on a twig for hours while you photograph them. Bees, wasps, etc. will pose nicely if you can lead them to a drop of honey or sugared water (deposited on a flower, perhaps). Many colorful moths and butterflies are best photographed just after they emerge from the cocoon or chrysalis, and it is at this time that their colors are most brilliant. Bring the cocoon inside, attached, to its original twig, place it in an observable spot or in a cage, and watch for signs of the moth's emergence such as rustling.

Outside, you might want to locate a clump of flowers upon which insects are feeding, focus on a selected flower, and wait until your preferred subject alights. This technique requires electronic flash lighting because of the certainty of subject movement. Some insects are less shy than others, and will allow you to approach them directly while they are feeding or resting. With any animal picture, make sure the eyes are in sharp focus; otherwise the whole animal seems unclear.

If you are stalking a spider in its web, be careful not to touch the web, or else the occupant will very likely drop to the ground. Web-weaving spiders can be captured in the woods, and deposited on shrubbery or prepared frames near your house where they will most surely spin a new web. The colorful hunting spiders, which do not make webs, can be brought indoors, chilled if too active, and placed in a natural-looking setting. Almost all spiders remain fairly still once they have been given an insect to eat.

As far as possible, align your camera and/or subject so that the subject is presented in a plane parallel with the film plane. This helps remedy the limited-depth-of-field problem.

Unless you have a purpose to the contrary, do not be too concerned about getting the whole of any small animal in your picture. Some of the most dramatic close-ups are taken just of an insect's head, for example, just as many of the better pictures of humans do not include the entire figure. Select what you think to be the most fascinating aspect of the subject, such as the face of a hornet, and make that feature fill as much of the frame as you can—the whole frame if possible.

In most extreme close-ups, the background will be well out of focus even if you shoot at the smallest apertures. However, it is important to get a background color and texture that complement the subject. Leaves, bark and rock make excellent backgrounds for natural subjects. Also, a useful technique is to place a piece of colored matte cardboard behind the subject. Be certain that the surface of the cardboard is not glossy, or it will produce an ugly reflection of your flash. Also, try to prevent shadows from falling across the cardboard background. If you are using a piece of light blue matte board to suggest sky, the effect will be ruined if your subject casts its shadow on the blue.

Many close-ups taken with flash have a jet-black background because the photographer ignored the absence of light-colored material behind his subject. This can be either good or bad but it almost always suggests that the picture was taken at night. Also, if an appendage of the subject, such as the antennae of a butterfly, is also black, it will not show up clearly against such a background.

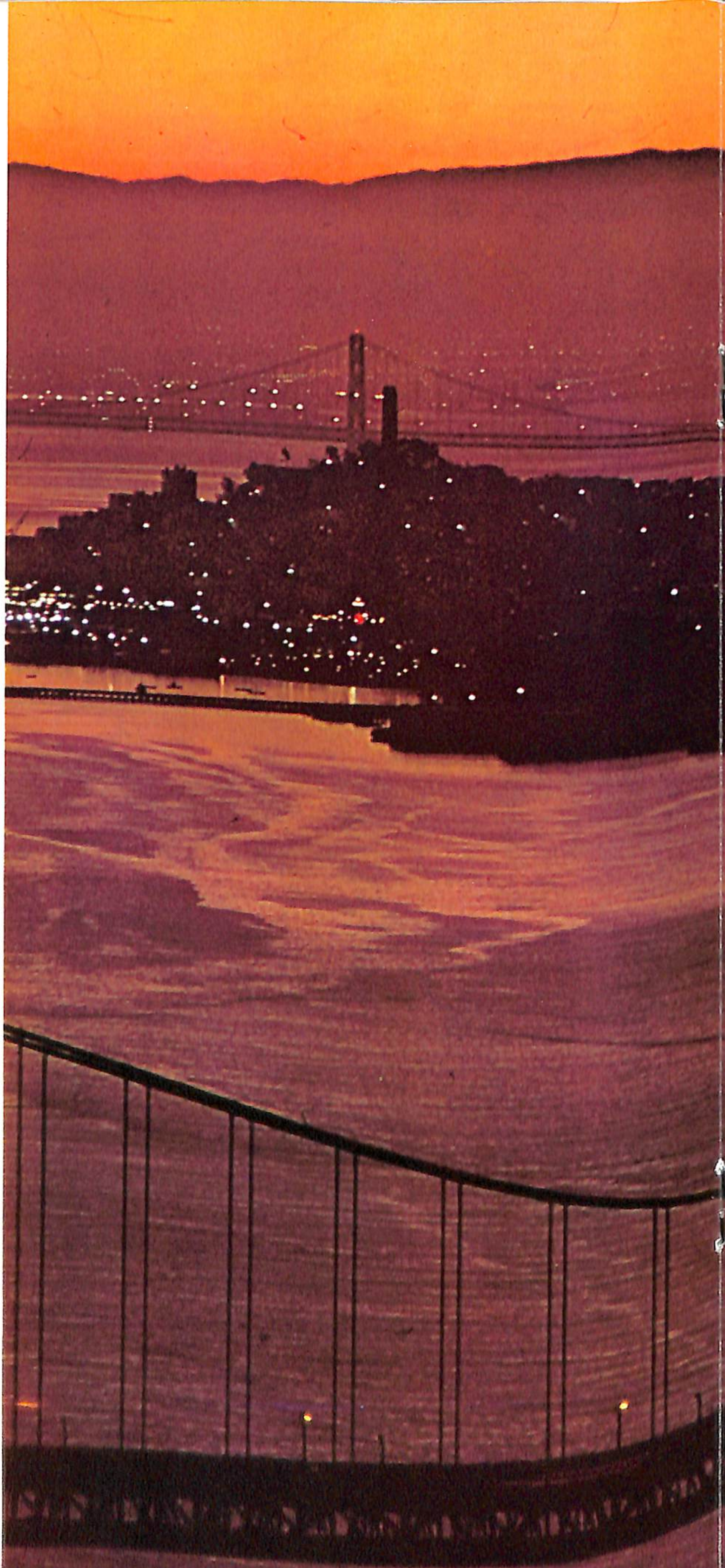
Few types of photography offer more challenge and satisfaction than close-ups of natural subjects. It is not enough, however, to become a good technician. You must periodically immerse yourself in the world of pristine nature and attempt to understand and appreciate the habits of animal life. The greater your reverence for the outdoors and its creatures, the more our sincerity will manifest itself in our photographs.

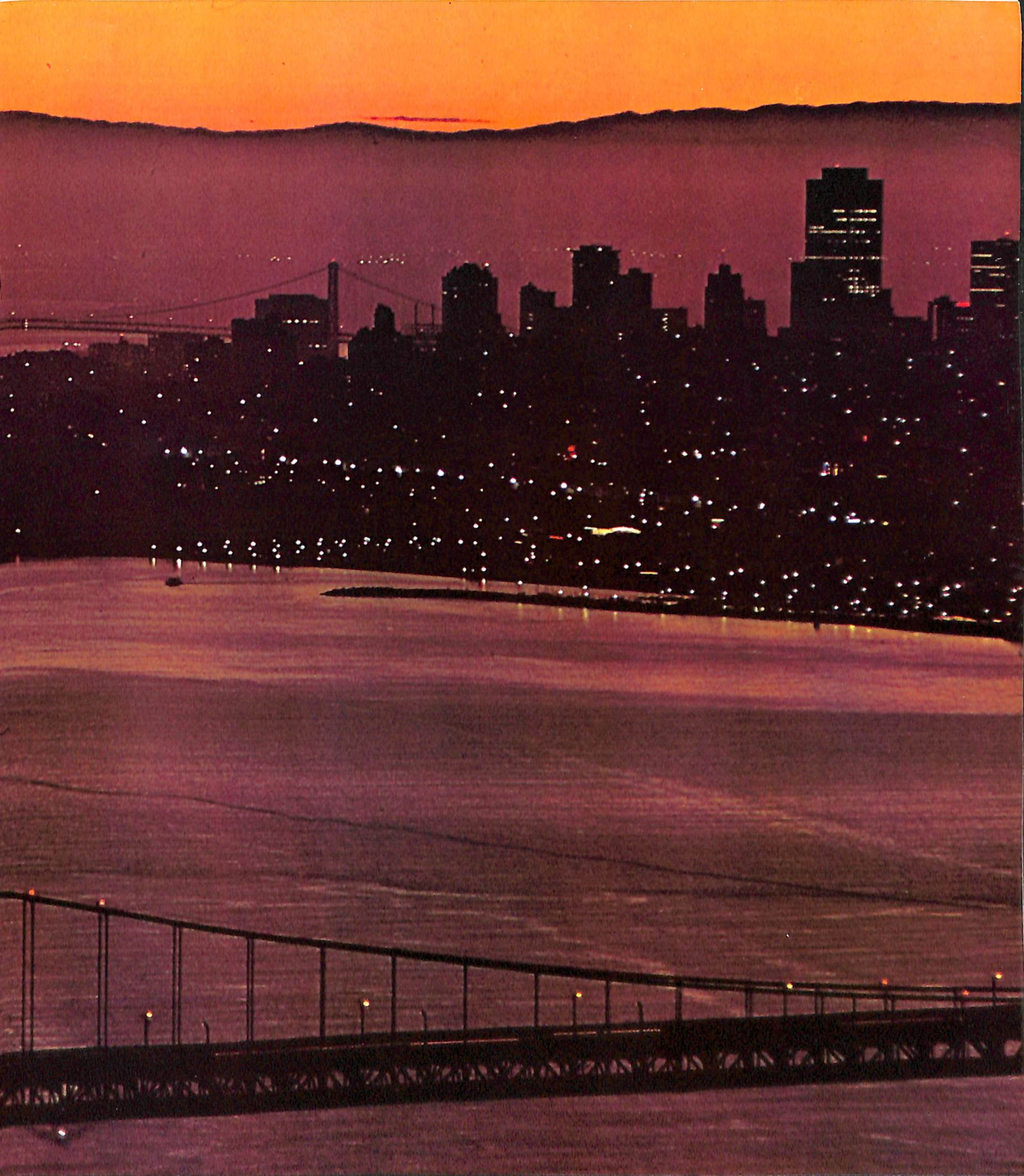
(Detailed information on depth of field, exposure factors and other considerations in close-up photography are available in references such as *The Leica and Leicaflex Way, The Leica Book* and others available from your Leica dealer... Ed.)

Bruce Davidson

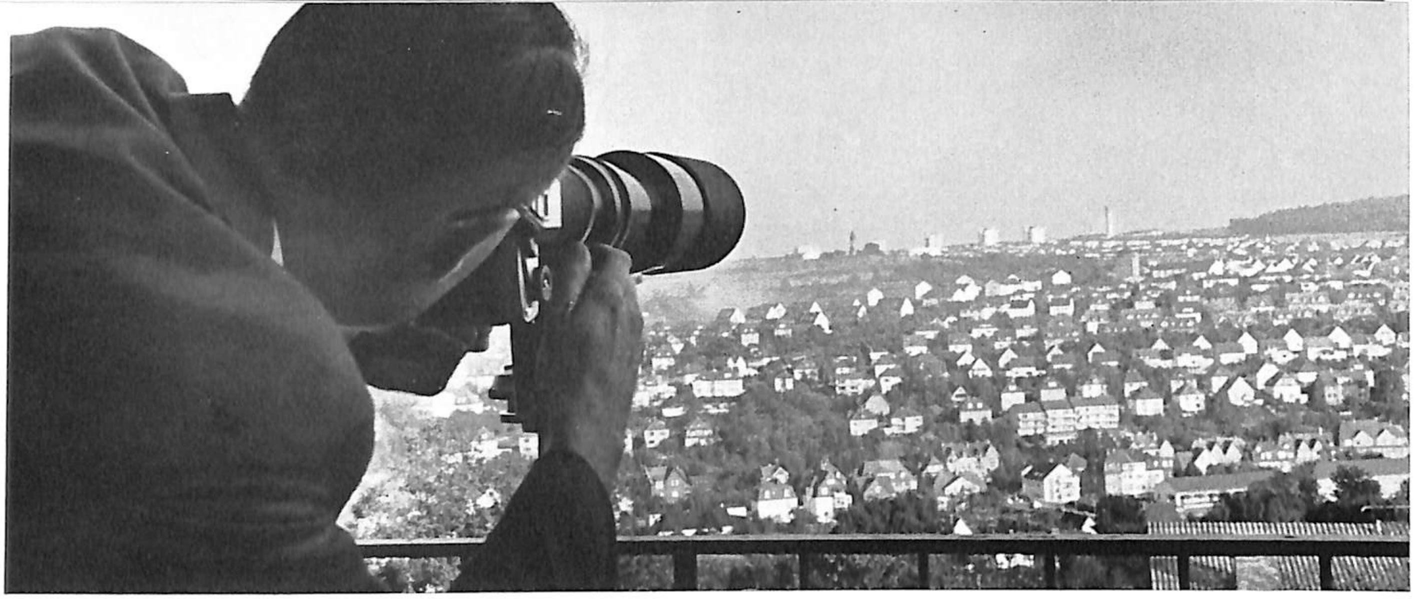
San Francisco

Bruce Davidson spent ten days in San Francisco recently for *Holiday*. During a period described as being the worst weather in many years, he worked from before-dawn hours until late at night to capture an interpretive portrait in color of the light, the space, the mood of the city. Instead of the assortment of cameras with which a professional photographer usually sets out, Davidson shot the entire story with one Leicaflex SL and accessory lenses ranging from 21mm to 400mm. He used a tripod at all times—both a heavy one for the longer lenses and a light one that he carried around on a shoulder strap. Always ready to experiment and try new ways, Davidson feels that the tripod, besides assuring sharpness, gives presence to his camera and establishes a certain reality, giving him a special rapport with his subjects, and enabling him to construct his photographs rather than to run away with them. Davidson says he relied on meter readings through the lens and then would add "what I feel". One of the most reputed of today's photographers, Bruce





Davidson is now awaiting publication by the Harvard University Press of an important book, "100th Street", a collection of photographs taken during a two-year period on one block in East Harlem. Simultaneously there will be an exhibition of the photographs at the Museum of Modern Art in New York that will subsequently be circulated throughout the country by the American Federation of Art.



The House on the Hill

Norman Goldberg

In Wetzlar, even buildings test lenses

The man in the house on the hill is smiling. He is happy because the sun is out and the weather is clear. He is going to take some pictures of some houses that look very small because they are far away.

I really don't know if the above appears in the first-grade primer as used in Wetzlar, but it almost should be required reading for tiny Wetzlarians. The smiling man in the house on the hill is Rudolph Seck, a unique member of the quality-control department at Leitz And through his and his colleagues' efforts, the children of a prosperous, optics-oriented Wetzlar and we, the Leica users of the world are decidedly happier.

What makes Seck unique among the people in the quality control group is not the fact that he tests lenses; droves of people at Leitz are involved in lens testing. Seck, however, is the man in the house on the hill, a house perched on the top of a hill that overlooks the whole of Wetzlar.

The house belongs to Leitz, but it's a short ride away from the main plant and the quality control department. From the balcony of the house there's a grand view of the countryside surrounding Wetzlar, with plenty of houses arranged in neat rows to provide just the perfect target for making a series of test-pictures with a new lens—weather permitting.

It seems that Wetzlar's weather gives the French Riviera Chamber of Commerce nothing to fear. Indeed, the special days in Wetzlar when distant objects are clearly visible deserve, and have been granted a special name. To Rudolph Seck, at least, these days are known as "Haeuschen-Wetter," which means, "small-house weather."

It makes perfectly good sense to me, but of course I've been to Wetzlar and seen the view from the house on the hill, both during "small-house weather" and also on those days that lend themselves best to contemplating the mystery of whether the sun really exists. During my last visit to Wetzlar, on a day of "small-house weather," I hurried up to the house on the hill to watch Rudolph Seck smile. There he was, busy making small-house pictures from his balcony.

At 37, Seck enjoys a position of importance at Leitz. It's safe to say that he is one of the most highly qualified people there to make a judgment about the specific and over-all performance characteristics of any given lens they make. His work also helps determine the adjustment tolerances for new lenses. What's more, he is responsible for the control of these tolerances during the initial production run of each new design.

His career began when he became an apprentice in a combined photo shop and studio at the age of 19. He attributes a lot of his special talents to the fact that his training took place during the years just after the end of World War II Germany was a defeated nation and the watchword, especially in a small-town photo shop was, "improvise." This skill in improvisation is quite evident in the present-day work Seck is involved with. After his training period, Seck took an examination given by a Federal committee of masters of photography. He was awarded a diploma in professional/commercial photography, and because of the high score he made in the diploma examination, Leitz became interested in him. In 1953 he began work in the Leica School as a teaching assistant. In this capacity he devised many different methods for demonstrating various photo and darkroom techniques to the students. His work in this area soon attracted the attention of the quality-control group, who then absorbed him into their department to utilize his skills.

It's his work in lens testing that first led me to meet him, but his work also includes the evaluation of photo equipment in general. A good example of this is something he showed me during my visit. He had three large prints, made with three different films, using the same lens/camera set-up. The subject was the same in all three prints—little houses—but the difference in the sharpness of the three prints was very noticeable. Two of the three had been made from so-called "normal" films, such as we all use for routine black-and-white work. Of the two prints, the one made from the slower, finer grained film was sharpest. But by comparison with the third print, the first two were pretty sad looking. The third print was made from a very slow, very fine-grained copying film.

His purpose in making the three was to illustrate that it is dangerous to form opinions about a lens from a test shot made on a film whose resolution is below that of the lens. While Seck employs photographic means to test lenses, they are pretty extraordinary photographic means.

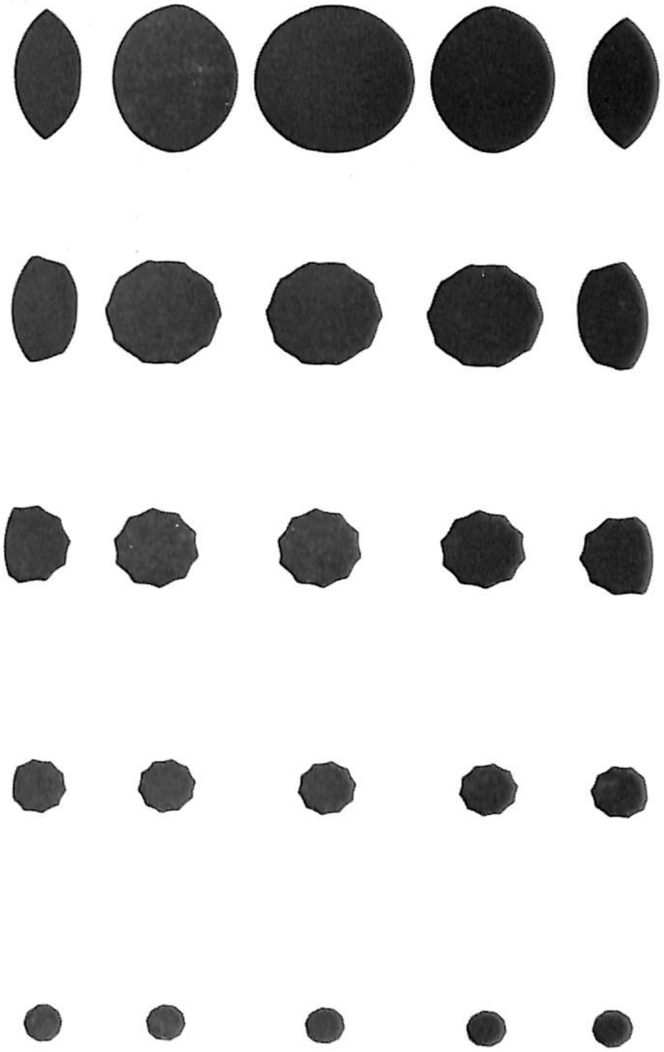
He uses a special camera to record the vignetting of a lens. In this camera, a sheet of photo-printing paper is used instead of a roll of film. The camera accepts the lens under test in a standard mount on its front. Instead of the image plane carrying the photo-sensitive material, it carries a flat metal plate with a series of holes. The holes are located at regular intervals across the field. When the image falls on the plate, the holes allow the rays of light to continue on through them to a chamber in the rear, a few centimeters behind the image plane. The photo paper is located on the rear of this chamber and it records the vignetting of the lens across the field.

You can think of it as a pinhole camera with an array of pinholes located across the field so that each pinhole forms an image of the exit pupil of the lens as seen from the various regions of the picture format. Although there are other, more sophisticated methods of measuring the vignetting of a lens, this method certainly offers the strong advantage of an all-inclusive one-shot graphic view of the situation with a given lens.

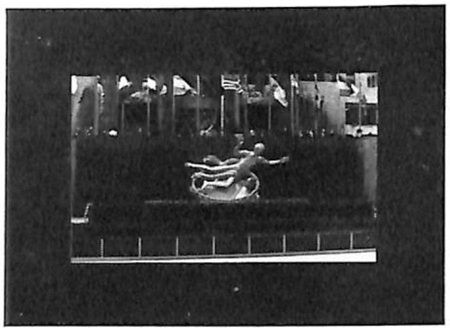
Seck's lens testing apparatus takes on forms other than cameras too. There's the familiar optical bench, with a variety of special test targets, most of which have been designed by Seck. Some of these targets resemble a hodge-podge of printed matter, seemingly stuck up on a board at random. But every element on the target has a meaning and purpose, whether to examine the variance in focus with color, or the rendering of high and low contrast detail by the lens under test.

A device still in the construction stage, but already being put to some use, is a special lens-testing projector for studying image quality by projecting a test pattern with the test lens. The unit is designed so that the lens mount rotates (it's motor driven) while the image is being projected onto a screen. By watching the various elements of the image on the screen while the lens is rotated, Seck can immediately spot any decentration in the lens. To demonstrate the unit to me he placed a lens with deliberately bad centering in the projector and turned it on. It was very obvious from the way the image "breathed" on the screen that the lens was badly decentered. Since good centration is so vital to optimum performance, and no small trick to achieve in mass produced lenses, this device is certain to prove most valuable.

The trick with many of these devices is the proper design of targets and methods for examining the images the lens forms of them. Here's where Seck's talents seem to be the sharpest. To someone like me, it's natural to envy Seck for his access to the resources of Leitz for such things as stereo microscopes to examine test negatives with, and all of the other marvelous Leitz paraphernalia he has scattered about in his laboratory. But even to the non-technical Leicaman, the house on the hill would be a place to envy. For, in one corner of the testing lab, there stands a cupboard crammed full of enough Leica equipment to put the largest camera shop to shame. What's more, a good share of the equipment is one-of-a-kind prototypes for which Seck has the responsibility of testing. It must be some particular brand of hell to have pieces of the future tucked away in your cupboard and not be permitted to talk about them, wouldn't you agree?

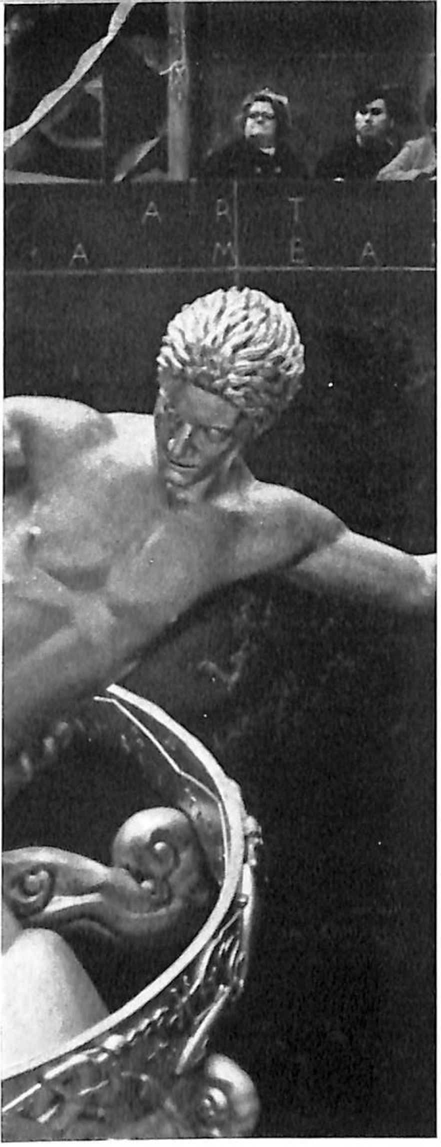


Lens vignetting test (above) was devised by Seck, using special camera and perforated plate, photo printing paper instead of film. Below, Seck views test negatives under microscope

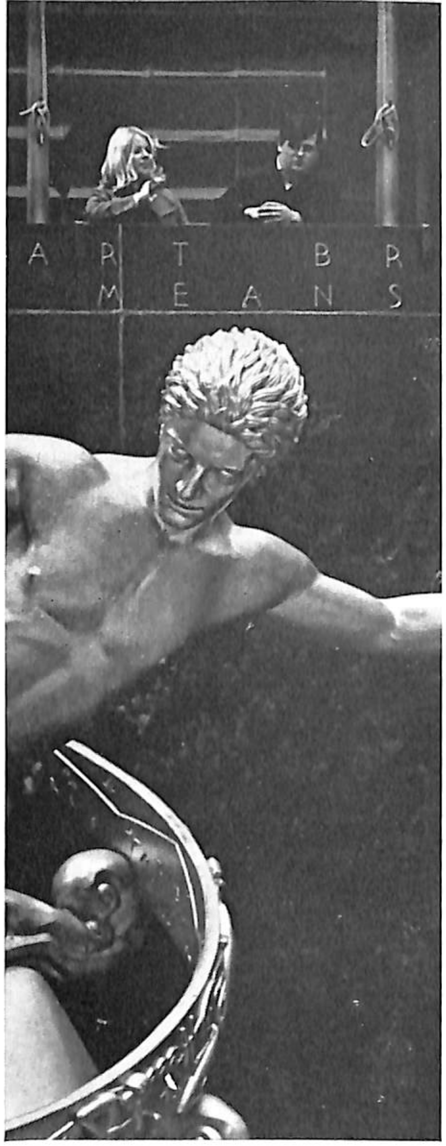


A New Path to Ultrafine Grain

Edward Meyers



Panatomic-X, 15X



High Contrast, 15X

Photograph the same subject with a fast film such as Kodak Tri-Pan and a slower, sharper film like Kodak Panatomic-X. Then make full-frame enlargements on 8x10 size paper. Compare the results. You might very well find no difference in sharpness or graininess in the prints.

Then blow up both pictures to 11x14 and then 16x20. Now you see the difference. If the graininess and lessened sharpness of Tri-X Pan bother you, then you've learned which film to use when you plan to make big enlargements. But when you continue blowing up the image and find need for an even sharper, finer-grained film than Panatomic-X, what do you do?

A number of years ago I experimented with some microfilm type films made by Kodak and Agfa. Although these films were designed for high contrast copy work, I exposed and processed them in such a way as to end up with conventional continuous-tone pictures. The results were quite good—extremely sharp and virtually grainless. I dropped the project. Lack of interest or maybe the uncertainties of repeatable results were probably my reasons.

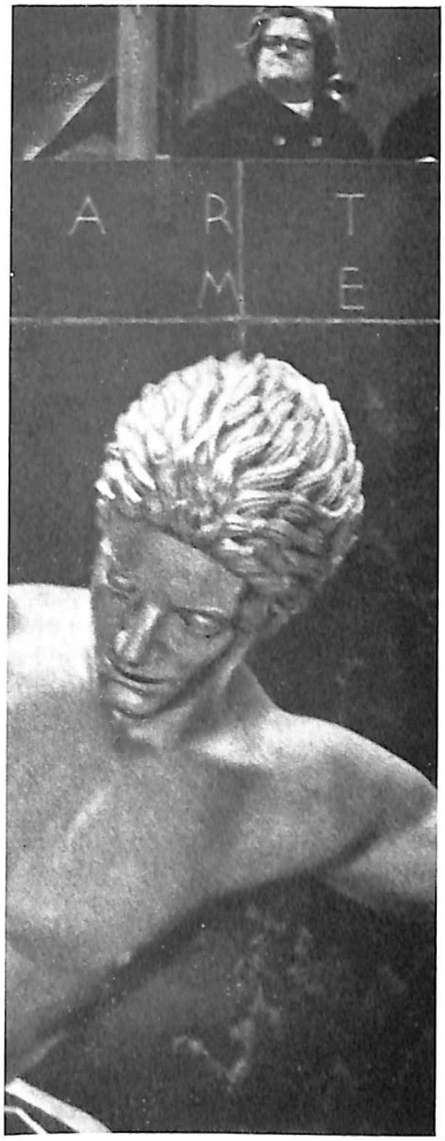
But now there's a new, commercially available developer expressly formulated for processing Kodak's High Contrast Copy film for conventional continuous tone photography. H & W Control is the name of the developer. It can be purchased in a small plastic bottle that holds 132 ml of this concentrated soup.

You dilute a mere six ml. of this liquid concentrate with enough water to make eight oz. of working developer. This is sufficient solution to process one roll of 35mm, 36-exposure Kodak High Contrast Copy film in a conventional stainless steel tank.

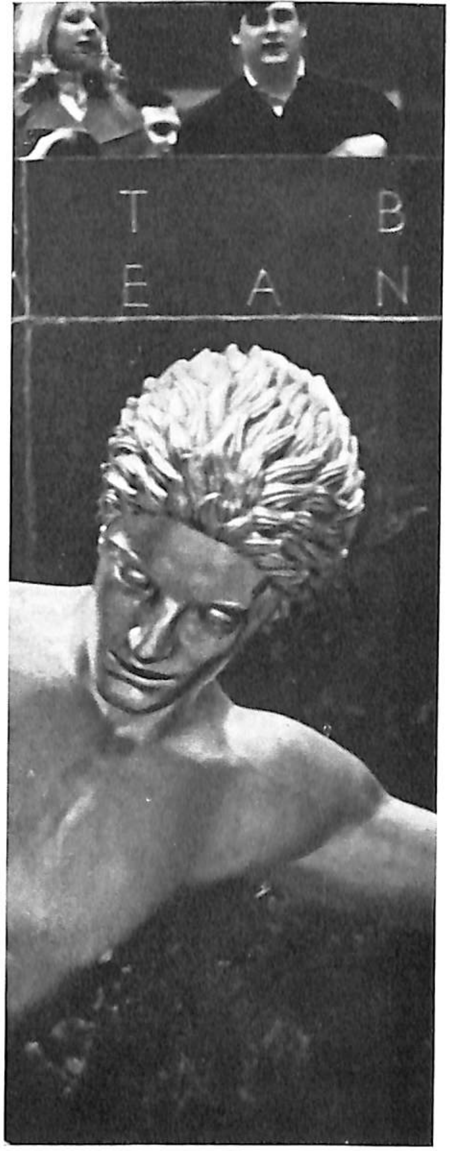
If you're good in math you've already figured out that one bottle of H & W Control will process up to 22 roll of film. That comes to just under 10 cents per roll.

The makers of H & W Control suggest you use E.I. 25 as a starting point and determine your own film speed by bracketing exposures. I did this and found mine to be from E.I. 8 to E.I. 16. The lower number works best in bright sunlight and the higher in lower contrast lighting situations.

Processing is simple enough, but demanding because agitation is critical. This means no break for a quick poker



Panatomic-X, 30X



High Contrast, 30X

hand while the film is being dunked. At 68 degrees F, processing time is 16 minutes. Agitation is as follows: "...constant gentle agitation (1 inversion of the tank each 2 seconds) for the first 2 minutes of development, and 3 inversions (6 seconds) each minute thereafter."

Would the results be worth the effort? To find out, I made the following test. I shot comparison pictures with my Leica M3 and the newest version of the 50mm Summilux f/1.4 lens. Roll number one was Kodak Panatomic-X rated at E.I. 32. Roll number two was Kodak High Contrast Copy rated at E.I. 25, at E.I. 8. I photographed the same scene, the one used in our illustrations.

Exposure readings were made with a Weston Master V reflected light meter. For the Panatomic-X I exposed at f/4 and 1/125. For E.I. 25 I guesstimated f/3.5 and 1/125. E.I. 16 was f/2.8 and 1/125, and E.I. 8 came out to f/2.8 and 1/60. For the photographs you see here, I placed my camera on a railing support to minimize any possible shake of the camera at these not-so-fast shutter speeds. I'll come back to this subject later on. Now let's see what happened.

I processed the Panatomic-X in Kodak Microdol-X diluted one part developer to three parts water at 70 degrees F for 13 minutes, as recommended by Kodak for best results. The High Contrast Copy film was processed in H & W Control as recommended by the H & W people.

All processing solutions, including the wash water were kept at the recommended temperature for the developer used—plus/minus about ½ degree. This is important, because a change of temperature could have affected the quality of the negatives and the consistency of results.

Now for the print making. I made matched 8x10 in. prints (actually 6x9) from similar frames shot with both films. I chose the E.I. 16 frame from the High Contrast Copy negatives as the normal exposure. Result was as expected—no difference was easily seen in sharpness or graininess at this enlargement. I wasn't surprised, since I find that it's often impossible to see any difference between even Tri-X Pan and Panatomic-X prints at this degree of enlargement.

The next step was to raise my Focomat Ic enlarger head as high as it would go and make 15x blow-ups of the central portion of each of the test negatives. This was done on 8x10 paper. Incidentally, the Panatomic-X negative printed on a grade 2½ contrast (I used Kodak Polycontrast paper with contrast filters). The High Contrast Copy negative had slightly less contrast (with H & W Control processing) and was therefore printed with a number 3 contrast filter. Now I could see the difference.

The High Contrast Copy negative developed in H & W Control was virtually grainless compared to the fairly fine image produced by the Panatomic-X negative. The High Contrast negative also won in the sharpness department.

Editor's Note: The men who formulated H & W Control developer used four Leica and six Leica lenses and a Valoy enlarger at various times in the experimentation that led to the development of their unique product. Interestingly, they used a 35mm Summaron not only for making, but also enlarging some of the test pictures. Of blow-ups from the center areas of test negatives, they write, "Big enlargements were made with the 35mm Summaron, which has a resolution performance in the center of 176 (sic) lines/mm (tested and proven with prints made from HCC negatives it both exposed and enlarged)."

Sharper, Safer Slide Projection

Norman Rothschild

Unfortunately for really sharp, jamproof projection, the cardboard mounts in which the processing lab returns your slides have a number of draw-backs. One is the physical nature of the mount itself. While cardboard is OK for occasional showing, your best slides should be placed in mounts that cannot warp, fray or dog-ear as cardboard often does. Another problem is a lack of film flatness.

Despite many attempts at unique cardboard mount design, no one so far has produced one that is a solution to the tendency of a thin piece of acetate or other film base to change its shape and bulge with changes in temperature and humidity. Therefore, no matter how good the slide projector and its lens may be, overall screen sharpness is a will-of-the-wisp. If you focus on the center of the transparency, the edges will be out of focus and vice versa. As the film buckles in the heat of some machines, the slide has to be refocused.

This is alleviated in automatic focusing machines such as the Leitz Pradovit-Color Autofocus, which will automatically refocus bulged slides. But it cannot guarantee that the area that is brought into sharpest focus will indeed be the most important spot. Only mounting in glass can help to assure overall sharp focus. This situation is even more serious for Superslides and 120 transparencies with their larger areas.

Important, too, is precise mount construction, so that the slide will sit correctly in the film gate. Other factors include a smooth mount surface to enable the slide to enter and leave the projector without jamming and an efficient seal against dust and dirt. To these ends E. Leitz, Inc., makes available an extensive line of Swiss-made slide mounts that match the preciseness of the Leitz Pradovit, Prado and Pradix projectors.

Perrot-Color and Per-O-Slide binders come in a variety of sizes and styles. Every popular slide size from Tessina 14x21mm and half-frame 18x24mm through the 2¼x2¾ Ideal-Format can be mounted precisely. Included, of course, are Perrot-Color and Per-O-Slide binders for standard 24x36mm Leica and Leicaflex transparencies. Recently a new slide mount was added to the lineup—the plastic Perdia. This Perdia mount is expected to be available before the end of the year in a second variety: with glass. The glassless variety solves the problem of rigidity in a mount that also provides freedom from fraying, bending and dog-earing. While the use of glass is necessary to insure best sharpness in projection, there are times when glass is not desired. In hot, tropical climates, for example, glass binders tend to trap moisture between the glasses, promoting fading and the growth of fungus. Glassless mounts are also preferred when a weight saving is needed, especially when large quantities of slides must be carried or shipped.

The chief advantage of Perdia mounts is that no special tools are needed to seal the mounts; it's only necessary to open the two halves of the binder in hinge fashion, insert the slide and fold the binder shut. Perdia binders are available only for standard 24x36mm color transparencies.

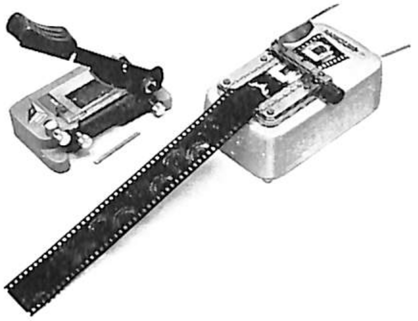
Perrot-Color and Per-O-Slide binders of metal (aluminum) and glass are preferred for highest dimensional stability and wherever the slide must be effectively sealed against dust and dirt. The sealing process in Perrot-Color and Per-O-Slide binders also insures their not coming apart during handling, or, even more disastrous, in the projector.

The difference between Perrot-Color and Per-O-Slide binders is that the former requires removal of the transparency from its cardboard or other mount, while the latter accepts the transparency in its 2x2-in. cardboard mount without tearing it apart. Per-O-Slide mounts are unique in that the outer dimensions of the mounted slide are not increased. To accomplish this, the cardboard mounts are trimmed by means of the Procut Mount trimmer. The Per-O-Slide is also different from other binders accepting cardboard mounts in that the glass is in contact with the transparency, thus preventing "popping" and unsharpness, by keeping the film flat. To accomplish this, Per-O-Slide binders consist of two metal frames having plastic inserts that hold the glasses in place. These glasses are thicker than the plastic inserts. Thus, when the mount is sealed with a Proloc Rapid Fastener the glasses extend into the cardboard frame and hold the transparency flat. (Clever Swiss engineering, that!) Per-O-Slides are slightly thicker than Perrot-Color binders.

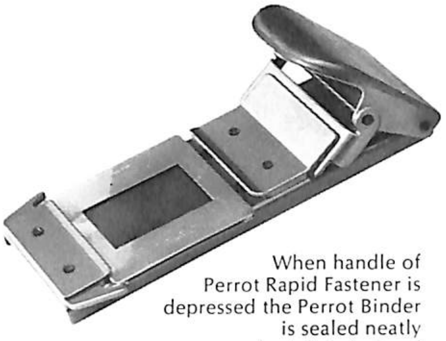
Perrot-Color 2x2 mounts are unusually thin, and fit Leitz and most other slide magazines and trays. Where extra-thin mounts are required, such as for certain American projectors that use metal frames, Perrot-Color Ultra Thin binders are recommended. These are only 1.9 mm thick, and are supplied only for 24x36 mm transparencies.

On the other hand, regular Perrot-Color binders are supplied in a great variety of sizes. In mounts with an outer dimension of 2x2 inches, not only 24x36mm Leica, Leicaflex; but also 4x4cm Superslide; 18x24mm Single-Frame, 28x28mm Instamatic 126 and 14x21mm Tessina transparencies can be accommodated.

Perrot-Color 2¾x2¾ (7x7cm) binders are for 2¼x2¼ transparencies. The actual picture area visible through the mask is 2⅛x2⅛ inches. The 2¼x2¾ "Ideal—Format" transparencies may be bound in Perrot-Color 3¼x3¼ mounts. The actual opening here is 2⅛x2⅞ inches.



At upper left: Perrot Cardboard Mount Trimmer for use with Per-O-Slide mounts. Perocut Film Trimmer (R.) is for cutting film to fit Perrot mounts.



When handle of Perrot Rapid Fastener is depressed the Perrot Binder is sealed neatly against dirt, dust and damage of slide.

Latest Perrot-Color mount employs thin mask with ears to hold slide securely. Film may be placed under single ear and angled slightly to straighten horizons, alter composition a bit.

Let us now discuss the unique construction of Perrot-Color mounts and the use of the Proloc Fastener. Each Perrot-Color slide mount consists of an aluminum frame with a permanently attached inner plastic frame, a thin metal cover mask and two prewashed cover glasses. In use, one cover glass is placed into the plastic inner frame, then the transparency is put into this emulsion side down. Next the second cover glass is placed atop the transparency and the thin metal cover mask is clicked into place. The entire assembly is then placed *with the thin metal cover mask down* between the jaws of the Proloc Proferm or Proli Rapid Fastener. At the same time the slide mount should be held firmly in place. Next, the handle of the Fastener is brought down, firmly, folding and sealing two binder edges at the same time.

You then turn the slide 90 degrees and repeat the operation for the other two sides. Sealing is accomplished by the borders of the inner plastic frame having a V-shaped groove into which the edges of the cover mask are bent.

Most Perrot users will be removing transparencies from cardboard mounts by cutting the latter apart. For workers who develop their own film, or otherwise receive it from the lab in a strip, there is the Perocut film trimmer. This has provision for moving the strip forward the correct amount for 18x24, 24x30, 24x24 and 24x36mm. A low-wattage bulb transilluminates the transparencies. There is also a round window near the cutting blade which tells you if the blade is going to cut correctly between slides.

This trimmer is also useful to trim a transparency that has been removed from its cardboard mount. Very often, they are unevenly cut at the processing lab and need trimming.

Separate rapid-fasteners are necessary for the various types of Perrot binders. In the 2x2 binders the No. 19,875 Proloc Rapid Fastener is for use with Perrot-Color and Per-O-Slide mounts. No. 19,874 is for use with Ultra-Thin 2x2 Perrot-Color mounts. Both of these are of aluminum construction. In precision stainless steel are No. 10,878 and 19,873 Proloc Precision Fasteners. These are for 2x2 Perrot-Color and Per-O-Slide, and for Ultra-Thin Perrot Color mounts respectively. For 2¾x2¾ Perrot-Color mounts there is the No. 19,983 Proferm Rapid Fastener, while for Perrot-Color "Ideal," 3¼x3¼ mounts there is the Proli Rapid Fastener.

In the catalog listing for the various Perrot binders you will probably have noticed that some are available with plain glass, as well as Anti-Newton-Ring glass. The plain glass packaging is somewhat lower in cost, and satisfactory in many cases. However, when the polished base of color film comes into near contact with polished glass, rainbow-like squiggles, called Newton's rings may appear on the screen. These can occur whenever two polished surfaces are not absolutely in contact, but are approximately ½ wavelength apart. One cure for this is to use Perrot mounts which have glass treated to prevent Newton's rings.

In most instances, only one such anti-Newton's rings type glass plate will be needed for each mount, since the Newton's ring formation takes place generally only on the polished, non-emulsion side of the film. However, Newton rings frequently also form on the emulsion side of the film, particularly, when the emulsion is protected by a coat of lacquer. If you need only one treated glass plate per slide, you may order one box of Perrot-Color mounts with treated glass, and one box with clear plates.

Another way to avoid the formation of Newton's rings with untreated clear glass plates is to use metal masks #19,855, which will keep film base and glass from coming into contact. These are available only for 24x36mm transparencies.

Perrot binders are packaged in boxes of 25, 24 or 20, depending on type and size. Every box includes a few extra cover frames, which are used in case it is necessary to remount a slide.

Perrot-Color metal slide mounts can be re-used again and again. It is very simple to open them by peeling off the cover frame with your fingernail or some sharp tool. The old transparency can then be easily removed and replaced, and all one needs to reseal the mount is an extra cover frame.

Extra metal cover frames, as well as extra cover glass in plain and anti-Newton's ring type, are available for rebinding.

Each box of mounts comes complete with self-adhesive labels for slide identification. These too are available separately for relabeling, or where more data must be noted than is possible on one label.

The Perrot-Color mounts #19,850 come in a transparent plastic box with 25 frames. These transparent boxes (available separately, Cat. No. 19,880) can be used for storage and carrying of 25 mounted Perrot-Color or Per-O-Slide. The Perrot-Color slide mounts #19,853 are supplied in a special transparent plastic box with grooved and numbered inserts. This empty box is useful as a storage box for mounted transparencies.

All-in-all, Perrot glass binders give your valuable color transparencies protection against dust, dirt and fingerprints. They also assure the sharpest projection in Leitz and other projectors by keeping the film flat. Their smooth, protrusion-free outer surface assures jam-free operation.

Focusing On

For Outstanding Service

For her active participation in many areas of social service, Dr. Elsie Kuehn-Leitz, a partner of Ernst Leitz, GmbH, has been awarded the Cross of Merit of the Order of Merit of the Federal Republic of Germany.

She is the sister of Dr. Ernst Leitz III, Dr. Ludwig Leitz and the late Guenther Leitz. Besides her cultural and service activities in and around Wetzlar, she has also been strong in support of the late Dr. Albert Schweitzer's hospital in Africa and in assistance to Biafra and the Congo. For her work in promoting closer relations between France and Germany, she has been made an honorary citizen of Avignon.

And Speaking Of Your Queries...

In its long lifetime (since 1932) *Leica Photography* has varied frequency of publication. It has been a monthly, and a quarterly and in recent years has appeared semi-annually. Many of you have written to ask if you have missed issues 3 and 4 (for example) of a particular year. The answer is, "No." In 1967 there were three issues; in 1968 and 1969 there were two in each year. So, if you have seven issues for the last three years, relax! You haven't missed any.

Correction

In our last issue, mention was made of the coming availability in 35mm of GAF Color Print Film. The story stated that the film (which can be processed in C22 chemicals) would be processed by Eastman Kodak processing labs. *This statement was an error.* Eastman will not process GAF Color Print Film, 35mm or otherwise.

Die-hard

At the 'Interkamera' fair in Prague last year, Leica No. 404, one of the first 1925 production series, appeared at the Leitz booth in the company of its owner, a Czech doctor. Leitz officials persuaded him to part with this collector's item (which was in good working condition and had been, according to its owner, in constant use for the 44 years of its life) in return for a brand new M4.

In the Driver's Seat

A book called "A Taxi Driver's London" (David & Charles, Ltd., London, 40 shillings) consisting of Leica and Leicaflex photographs of that city was recently published. They show the London scene as pictured by the author, cabby Maxwell Revell Green, while cruising the streets of that city, both on duty and off. The book is not available in the U.S. at this time.

What About The Crystal Ball?

Walter Mandler, vice president of Ernest Leitz (Canada) Ltd. for research and development, and designer of several Leica and Leicaflex lenses made some forecasts of the future in lenses in the February issue of *Canadian Photography*. Speaking of optics in general, Mandler predicts that improved mechanical techniques for moving the lens elements plus the intensive use of modern computing techniques in formulation will produce compact, lightweight zoom lenses in the 50 to 135mm range. He also foresees a zoom in the 70 to 200mm range whose physical size will be hardly longer than a present fixed 135mm lens.

Another Mandler prediction is that the performance levels of wide-angle and telephoto lenses will be raised to that of the best current normal focal-length lenses such as the 50mm Summicron f/2.

Please Forgive Slow Replies

Remember how long it took before things settled into routine after you changed quarters the last time? We've been having the same experience—in spades since moving from New York City to our new quarters in Rockleigh, N.J. One result has been a bad delay in answering the mail, and we want to apologize for any anxiety or inconvenience it may have caused you. But things are pretty well under control now, and our answers to your letters should be prompt and cheerful from here on out!

Senior Citizen

Age cannot wither nor custom stale the Leica's infinite variety, but every so often something reminds us forcibly of how far back Leica tradition actually goes. A recent look at a 1912 Sears, Roebuck & Co. catalog (that was the year Oskar Barnack produced the Leica prototype) uncovered ads for 'immigrant wagon' covers—in many varieties and sizes. In other words, when the revolutionary little camera was first designed, people were still crossing the United States in covered wagons. As a matter of fact, America had only 46 states the year the Leica prototype was born.

Color Slide Courses

As she has for many years past, Helen C. Manzer, PhD, FPSA, ARPS, will again offer courses in color photography this summer and fall.

Three courses will be given on California's Monterey Peninsula, the first from May to June 5, the second from June 14 to June 26, the third from June 28 to July 10. Further details about these West Coast courses are available from Thomas J. Hardy, 771 Toyon Drive, Monterey, California 93940.

On the East Coast, courses will be offered at Weirs Beach in the well-known Lakes region of New Hampshire. The first course will run from July 26 to August 7; a second is from August 9 to August 21. Special courses featuring fall foliage will also be offered—the first from September 27 to October 2, the second from October 4 to October 9.

Information about the New Hampshire courses is available from Ruth L. Wiesen, P.O. Box 553, Newport, Vt. 05855.

New Products

Leica M2R.

Limited edition

A Leica model that combines the silhouette and operating features of the M2 with the quick-loading take-up system introduced in the M4 is now available in limited quantities. It is called the M2R, and is available only with the 50mm Dual-Range Summicron f/2, although it will accept all other Leica lenses and Visoflex models that fit the M2. Like that of the M2, the M2R's viewfinder includes bright-line frames for 35, 50 and 90mm lenses which can be brought into position at will by means of the preview lever, to help in choosing the proper focal length.

The Leica M2R (Cat. No. 98,301), complete with 50mm Dual-Range Summicron f/2 lens, is available at an attractive price.

Long, Lean, Lightweight: 400mm Telyt f/6.8

A new rapid-focusing telelens for Leica, Leicaflex

When there's room to use a 400mm, you're usually outdoors where even ASA 64 color film can be shot at speeds and apertures like f/8 at 1/250—ample for hand-held exposures. So why not eliminate the extra glass, weight and bulk that go with large aperture long-focus lenses by designing one with a moderate top speed, lightweight and fast-handling potential? Why not, indeed?

That's just what has been done in two versions (one for Leica Visoflex housings, one for Leicaflex bodies) of the 400mm Telyt f/6.8 in rapid-focusing mount—the lightest, fastest-handling 400 ever to be offered by Leitz.

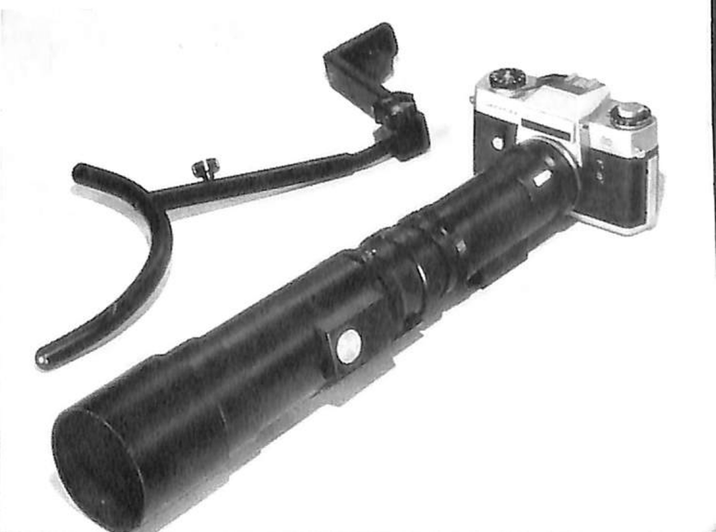
A highly corrected achromat, the new lens offers brilliant contrast—an important attribute of long lenses that are often used to shoot over long distances in which image contrast is diminished by aerial haze. The contrast of the Telyt f/6.8 is also helpful in focusing.

Fast focusing is accomplished by a parallel, sliding movement of the lens mount, which can be either locked in place or released by pressure on a push-button on the lens mount.

The close focusing distance of the new lens is an extremely useful 12 feet —at which point the field covered is only 6x9 inches. This can provide supertight head crops for portraits as well as good animal and bird close-ups from a relatively long camera-to-subject distance.

For steady hand-held exposures, the lens is provided with a removable, adjustable shoulder stock that is especially useful in making rapid-sequence photographs. This shoulder stock attaches to the tripod socket of the lens mount. The lens barrel of the new 400 has a convenient filter slot behind the lens that accepts standard series VII filters. For carrying and storage convenience, the lens can be separated into two parts, making it fit readily into a normal gadget bag or case.

The lightweight, rapid handling 400mm Telyt f/6.8 is particularly useful for photojournalism, sports and nature photography. The Telyt R model for the Leicaflex (Cat. No. 11,960) complete with shoulder stock built-in lens hood is priced at $444. The model for the Visoflex housing (Cat. No. 11,966) is $435.



Use a Plural Outfit for Singular Pictures

Harvey V. Fondiller

Fast-changing situations need two-camera approach

More than thirty years ago, I bought my first Leica, a Model C with 50mm Hektor f/2.5 lens. But it wasn't for a number of years that I began to experiment with lenses of different focal lengths. Now that I also own a Leica M2, I've found that it's not only convenient, but almost necessary, to carry two cameras with short and long lenses.

Two Leicas, one with a 35mm lens and another with a 90 or 135mm lens, seem to me to be a perfect combination for all-around picture taking. And, of course, carrying two cameras enables one to shoot both black-and-white and color as needed, and without loss of time.

Ed Meyers, a busy New York professional, usually works with two Leicas around his neck, (see photo above) plus a third suspended from his shoulder. He prefers the rangefinder Leica because, he says, "three of them weigh little more than an SLR and the lenses are lighter."

From his shoulder hangs an M3 with a long lens, the 135mm Tele-Elmar f/4 or 90mm Elmar f/4. Suspended from his neck is an M2 with either 35mm Summicron f/2 or Elmarit f/2.8; underneath is another M2 with 50mm Summilux f/1.4. Meyers finds that this ultra-speed lens is a necessity, for the bottom camera is often motorized and he needs a wide aperture for color.

Sometimes he puts 50mm lenses on both of his neck-suspended Leicas if he wants duplicate shots in black-and-white and color. A glance through the viewfinder of a camera fitted with a 50mm lens tells Meyers where he stands in relation to the subject. He uses the long lenses as "detail" lenses and the 28, 35, and 50mm lenses are "normal."

"A lot depends on your distance from the subject," says Meyers. "I like to be in close, so I correlate the lenses to my camera-to-subject distance. In photographing people, I like to be at 'contact' distance—usually a conversational two or three feet. The rangefinder on my Leicas enables me to shoot fast, and the bright-line finder makes it possible to keep both eyes open, so that I can see the area surrounding the frame. This is useful when photographing fast-moving subjects such as children at play."

During a recent assignment for Aspira, a Puerto Rican organization that provides tutorial help for youngsters, Meyers accompanied a youth during a day and a half of intensive shooting. He used a 21mm lens for an establishing shot of the boy in his room in a Brooklyn, N.Y. apartment. Later he switched to the 50mm to photograph him in class, and shot with a 28mm lens to show him and his friends in various parts of Brooklyn. Although he carried 90 and 135mm lenses on this assignment, he did not use them.

Meyers doesn't hesitate in selecting the camera with the desired lens when he's shooting. "After a while you don't have to think which is which," he says. He puts a Leicameter on the upper camera for making quick exposure checks.

Another advantage of shooting with two or more cameras, he says, is that if you run out of film, you can quickly switch the lenses to a camera that still has film in it. He usually uses either black-and-white or color film in two of his cameras, and uses the third for color only.

Harvey Weber, director of photography for Newsday, a 450,000-circulation newspaper in Long Island, N.Y., usually carries *three* Leicas—two around his neck and one in his hand. On a short strap, he has an M4 with a 200mm Telyt or 125mm Hektor, and on a long strap another M4 with 35mm Summicron. In his hand he carries an M4 with 65mm Hektor f/3.5.

Depending on his assignment (Weber covers news and feature stories), he may have one, two, or all three of the Leicas loaded with either black-and-white or color film. Ordinarily he makes the wide-angle shots first, but he may shoot a story as the subject presents itself. Sometimes he shoots with the telephoto first, then follows up with wide-angle shots.

Weber notes a number of advantages in carrying several Leicas at a time. "When covering a football game, I may have to use a telephoto for action in mid-field, then switch to wide-angle when the action veers to the sidelines," he says. "If I'm stuck on one spot while making pictures of a dignitary speaking, I shoot closeups with a long lens, and crowd shots with the 35mm."

He advises photographers to use different lengths for the neckstraps so that the cameras won't knock together, or to have one Leica around the neck and one in hand.

If you have been using only one lens, you may even be temporarily slowed down by the flexibility that two or more lenses provide. Decisions, decisions. But this phase quickly passes. Soon you'll discover, and rejoice in the role of two-fisted Leicaman.

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Bring a couple of your greatest slides to your authorized Leica dealer. And let him show you how much greater they look on a Pradovit-Color or Pradovit-Color-Autofocus slide projector.

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